



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,326	08/31/2006	Naoki Nishiura	VX062753 PCT	9434
23400	7590	04/13/2011	EXAMINER	
POSZ LAW GROUP, PLC 12040 SOUTH LAKES DRIVE SUITE 101 RESTON, VA 20191			FANG, SHANE	
			ART UNIT	PAPER NUMBER
			1766	
			NOTIFICATION DATE	DELIVERY MODE
			04/13/2011	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailbox@poszlaw.com  
lwebbers@poszlaw.com  
dposz@poszlaw.com

## DETAILED ACTION

### ***Response to Arguments***

The argument for allowance of amended claims has been fully considered but not persuasive. No claim amendment has been submitted after the last final action.

The submitted 1.132 Declaration shows no evidence of comparing with closest prior arts cited to rebut the previous 103 rejection. The whole document merely contains arguments that are repeated in submitted Applicant Arguments/Remarks. Thus, this 1.132 is found insufficient.

The applicant argued (Pg. 6-7) Kanetake and Economy cannot be combined because they are in different technical fields: Kanetake teaches carbon filled polyimide film, while Economy teaches a polyimide film comprising amino-terminated amic acid oligomer and a tetracarboxylic diester of an alcohol as essential component; combining Kanetake and Economy would provide a polyimide film with electron withdrawing group; no TSM has been shown to combine Kanetake and Economy. The examiner disagrees.

First, all cited references are directed to the field of applicant's endeavor. Kanetake (primary reference) pertains to polyamic acid composition for carbon filled polyimide films (claims). Hasegawa pertains to polyamic acid composition for making polyimide films (Pg. 388, left col.). Wilson (as evidence) teaches general principle of polyamic acid conversion to polyimide films. The examiner thanks applicant's acknowledgement of Economy teaching producing a polyimide film on a substrate (Pg.6, last line of ¶3).

Second, flatness is an issue the present invention attempts to solve (instant 0008), and Economy solves the same problem by improving the planarization. Economy is reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention.

Thirdly, the applicant attacked Kanetake and Economy. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See MPEP-2145.

Finally, a polyimide film without electron withdrawing group is not what claimed. Kanetake is silent on polyamic acid being oligomeric and prepared from multiple asymmetric and symmetric dianhydrides. Economy discloses a composition comprising oligomeric polyamic acid (PMDA-ODA) and ester having a MW range meeting that of claim 12. Economy further discloses the composition would yield a polyimide film and coating with good planarization, mechanical and thermal stability, and excellent flexibility. Hasegawa discloses a polyimide prepared by blend of a first polyamic acid (symmetric dianhydride (s-BPDA) with diamine) (80%) and a second polyamic acid (asymmetric dianhydride (a-BPDA) with diamine) (20%) to improve the thermal processability of polyimide based on BPDA/diamine without decreasing the  $T_g$  (Abs.). Hasegawa discloses said polyimide has improved mechanical properties compared to polyimide based on PMDA/ODA can be used in films and composite (¶1, P.387). As evidenced by Wilson et al., the blending would results in a polyamic acid composition having same structure and reaction sequence as recited in claims 9 and 11.

In light of this, the examiner asserts Economy and Hasegawa teach motivations to be combined with Kanetake. The combination of above four references would result in the claimed composition.

Therefore, as to claims 7-8, 10, and 12-16, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the composition and process disclosed by Kanetake, replaced the polyamic acid with the oligomeric polyamic acid (PMDA-ODA) composition in view of Economy, and further replaced the PMDA-ODA polyamic acid of Economy with the asymmetric/symmetric dianhydride ratio in view of Hasegawa, because the resultant composite film would have improved good planarization, thermal stability, and excellent flexibility, thermal processability and retained  $T_g$ , and further improved mechanical properties.

Particular to claim 8, all four references discloses or implies the reaction at room temperature. All four references are silent on the reaction temperature of claim 10. Claims 8 and 10 are product-by-process claims that are limited by and defined by the product. Determination of patentability is based on the product itself, not on its method of production. See MPEP § 2113. Instant 0170-0174 indicates these reaction temperature ranges are used to produce oligomers having  $M_n$  of 1k to 7k. In this particular case, the resultant oligomeric polyamic acid meets the chemical and molecular weight requirement of claims 8 and 10.

The applicant further argued the claimed polyimide film having unexpected results (Pg. 8) without showing evidence comparing with the closest arts cited. This

argument is not persuasive for not showing evidence. It is notified no evidence of comparing with closest prior arts is shown in the submitted 1.132.

Therefore, the previous 103 rejections of claims 7-8, 10, and 12-16 over Kanetake et al. in view of Economy et al. in further view of Hasegawa et al. and evidenced by Wilson et al. have **been maintained**.

The applicant has traversed the ODP rejection by arguing 12/441980 is a later filed application (Pg.8-9) and this application is filed much earlier, and therefore the rejection should be withdrawn. Applicants" are reminded that, if two (or more) pending applications are filed, in each of which a rejection of one claimed invention over the other on the ground of provisional \*\*>nonstatutory< double patenting (ODP) is proper, the >provisional< ODP rejection will be made in each application. If the >provisional< ODP rejection is the only rejection remaining in the earlier-filed of the two pending applications, (but the later-filed application is rejectable on other grounds), the examiner should then withdraw \*>the provisional ODP< rejection and permit the earlier-filed application to issue as a patent without a terminal disclaimer. If the >provisional< ODP rejection is the only rejection remaining in the later-filed application, (while the earlier-filed application is rejectable on other grounds), a terminal disclaimer must be required in the later-filed application, before the >provisional< ODP rejection can be withdrawn. If the >provisional< ODP rejections in both applications are the only rejections remaining in those applications, the examiner should then withdraw the >provisional< ODP rejection in the earlier-filed application thereby permitting that application to issue

without need of a terminal disclaimer. A terminal disclaimer must be required in the later-filed application before the >provisional< ODP rejection can be withdrawn and the application be permitted to issue. See MPEP- 1490 (V). D, 804B.2. In this case, we have other rejections remaining; rejections have to be maintained and addressed (not held in abeyance, as requested) as required by the MPEP; it is possible that a double patenting rejection in the later case may not be appropriate, therefore why would applicants' file a TD in that case if one cannot be made; and finally, it is not the office's issue/problem that this case was filed "much earlier" than the case cited above. For these reasons the ODP is deemed proper and maintained.

Therefore, the previous ODP rejections have **been maintained**.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHANE FANG whose telephone number is (571)270-7378. The examiner can normally be reached on Mon.-Thurs. 8 a.m. to 6:30 p.m. EST.. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sf

/RANDY GULAKOWSKI/  
Supervisory Patent Examiner, Art Unit 1766